



Labour Rate Setting for Transport Company's Managers Based on the Principles of Organisation Design



Vladimir N. NIKITIN



Mikhail Yu. KALASHNIKOV



Olesya S. LITVINOVA

Vladimir N. Nikitin¹, Mikhail Yu. Kalashnikov², Olesya S. Litvinova³

^{1,3} JSC Russian Railways, Moscow, Russia.

² Centre for Labour Management and Design of Economic Standards, a branch of JSC Russian Railways, Moscow, Russia.

✉ ³ litvinovaos@center.rzd.ru.

ABSTRACT

Analysis and labour rate setting regarding management activities is an important tool in the modern economy, used to improve the corporate efficiency by optimising existing management processes, reducing bureaucracy, and eliminating redundant processes, and, consequently, administrative elements that do not create value, and are an obstacle to normal functioning of the management system. The application of analytical methods to the work of managers is a relevant and powerful tool for increasing productivity and efficiency of corporate management.

The article describes the results of a study of tools for analysis and regulation of management activities implemented in the Russian Railways holding company based on the principles of organisation design.

The subject of the study is management activity as an object of application of modern methods of analysis and labour rates. The objective of the study is to show the possibility and feasibility of using modern methods of analysis and regulation of labour on the

example of a large transport company. The purposes of the study, the results of which are presented in this article, comprise identification of prerequisites for adoption of methods of analysis and regulation of management activities; assessment of possibilities of using the tools of functional analysis of organisation's entities and divisions to increase efficiency of management activities; description of technologies for labour rate setting for management activities using the example of the Russian Railways holding company.

The study is based on the use of methods of process analytics, functional analysis, labour rate setting, and organisation design.

The main result of the study is development of methodological approaches to analysis and standardisation of managerial work in a transport company. These approaches will make it possible to reasonably develop labour standards and rates for managers, staffing plan, and adopt modern management practices in the Russian Railways holding company.

Keywords: organisation design, labour rate setting for managers, process, function, labour rate, method of labour rate setting, transport, railways.

For citations: Nikitin, V. N., Kalashnikov, M. Yu., Litvinova, O. S. Labour Rate Setting for Transport Company's Managers based on the Principles of Organisation Design. *World of Transport and Transportation*, 2021, Vol. 19, Iss. 2 (93), pp. 250–257. DOI: <https://doi.org/10.30932/1992-3252-2021-19-2-15>.

The text of the article originally written in Russian is published in the first part of the issue.

Текст статьи на русском языке публикуется в первой части данного выпуска.

INTRODUCTION

Company's managers tend to be sceptical about the very ability to analyse and standardise their work. The main argument is that, in contrast to simple technological processes, in which all operations in the chain of the production cycle and their sequence are obvious and can be measured, and the labour results in a material, tangible product (service), the work of a manager is intellectual and analytical activity that requires creative, non-standard thinking, which depends on complexity and urgency of the tasks that arise with an indefinite frequency. This approach was widely quoted in different sources, namely in the textbooks intended for training future managers [1–4].

However, as both domestic and foreign practices show, the problem of analysis and standardisation of labour costs for managerial employees: administrative employees, specialists, managers is quite solvable [5; 6].

Today, development of IT and telecommunications, the use of modern technologies for operating big data, artificial intelligence, electronic accounting, business intelligence and office work, technical means of recording and recognising individual operations, as well as various methods and platforms for modelling and simulating business processes, including management processes, offers us ample opportunities for analysis of labour costs and the cost of management personnel. Probably, soon the world will reach such a level of digitisation of processes, when it will be possible to find out the labour costs of any person for any period of time by requesting this information in the global database online.

The *objective* of the study is to show the possibility and feasibility of using modern methods of analysis and regulation of labour on the example of a large transport company.

The tasks of the study, the results of which are presented in this article, are as follow:

- Identification of prerequisites for adoption of methods of analysis and regulation of management activities in an organisation.

- Assessment of possibilities of using the tools of functional analysis of organisation's entities and divisions to further increase efficiency of management activities.

- Description of technologies for labour rate setting for management activities using the example of the Russian Railways holding company.

The study is based on the *methods* of process analytics, functional analysis, labour rate setting, and organisation design.

RESULTS

Russian Railways Holding Company's Experience

The authors of the article carried out a study within one of the largest transport companies in the world, which is JSC Russian Railways, the backbone company of the Russian Railways holding company. A multi-level, multi-profiled, sophisticatedly structured company employs more than 55 thousand managers at various corporate levels. This provides extensive empirical material for the study of the problem of standardisation of management activities.

Currently, the holding company has launched a comprehensive work on implementation of organisation design and process management. The Regulation on Organisation Design in the Russian Railways Holding Company put into effect in 2020 contains the basic rules and requirements for design of organisational and functional models of the company's divisions and entities and for management of organisational change¹.

In conformity with the principles of its provisions, comprehensive application of organisation design tools, such as the analysis of management processes and the analysis of the organisational and functional model of the company constitutes the foundation for measuring and optimising labour costs of employees, including administrative and managerial personnel [7–9].

Analysis and standardisation of management activities is the target of the company. It will be possible to solve it through development of a process model of the holding company, decomposed into an event chain of standardised operations, interconnected with the organisational and functional model based on a single information platform. Today, at the stage of formation of this model, analysis, and measurement of labour costs of management activities is carried out pointwise [10; 11]. First, this work is carried out in relation to problem areas of activity to implement organisational

¹ Regulations on Organisation Design in the Russian Railways Holding Company, approved by the order of JSC Russian Railways dated July 26, 2019 No. 1606r [Polozhenie ob organizatsionnom dizaine v kholdinge RZD, utverzhdeno rasporyazheniem OAO RZD ot 26.07.2019 № 1606r].



Table 1

Organisational unit name	Task	Function	Product (result of function performance)	Consumer (who needs the result of function performance?)
<i>Service of economics and finance</i> (example)	Wording of the task should briefly describe the result that the activity of the structural unit is aimed at	A set of homogeneous specialised work tasks (actions, operations) performed by a structural unit to solve the tasks assigned to it	The most specifically described result of performing a function that has value for the consumer	An external or internal consumer of the result of performing a function (another organisational unit or official, an individual, etc.)

target projects to improve the organisational and functional structure and management system, as well as when creating new organisation's entities.

Functional analysis or analysis of business processes is carried out after preliminary diagnostics of the management system, when the following statements are true with respect to the work of business units [12]:

1. Decision-making is long, or decisions are not taken at all.
2. The function is fulfilled, but it does not create value for the external or internal client.
3. There is responsibility for performance of the function, but the authority is not sufficient to perform it properly.
4. Responsibility for performance of the function is blurred between several organisational units.
5. Responsibilities between managers (departments) are not distributed.
6. An organisational unit (employee) performs work that is not fixed in any organisational document.
7. There is a redundant workflow.
8. The workload of personnel of different organisational units is unevenly distributed. In some cases, there is a regular presence at work outside of working hours, in other cases, there is a chronic underload.

Sources of information for carrying out functional analysis include regulations on divisions, orders regarding distribution of

responsibilities between managers, job descriptions, analysis of products (services), business intelligence, office systems, corporate performance indicators, as well as the results of a survey of the employees.

Many different analytical forms are used to visualise the analysis.

An example of visualisation of a functional analysis of an organisational unit, which makes it possible to identify discrepancy between tasks and functions, «empty» functions that do not create value for the company, is shown in Table 1.

Using RACI matrix

For functional analysis, RACI matrix is also widely used, which makes it possible, through the roles and responsibilities of organisational units (Responsible, Accountable, Consulted, Informed), to visually see redundancy, duplication of functions, imbalance in distribution of powers and responsibilities between participants in performance of these functions, as well as possible uneven workload between organisational units [13–17].

Vertical analysis of RACI matrix allows determining responsibilities and powers of each organisational unit, objectively assessing the level of workload, for example:

1. If many roles for a unit are marked with R (responsible) that «overload» of an organisational unit is possible (Table 2).

Table 2

Function (F)	Organisational unit (OU)					
	OU1	OU2	OU3	OU4	OU5	...
F1	I	I	A	R	–	–
F2	C	R	R	–	A	I
F3	A	R	C	I	C	R
F4	–	R	C	R	I	A
F5	C	R	–	–	C	I
F6	I	R/A	C	R	I	C
F7	I	–	C	R/A	–	C
...						

Table 3

Function (F)	Organisational units (OU)					
	OU1	OU2	OU3	OU4	OE5	...
F1	C	I	R	R	A	C
F2	I	–	A	C	A	I
F3	R	C	C	I	A	R
F4	R/I	C	A	R/C	I	R/I
F5	R	R	A	I	C	R
F6	–	A	R	–	R/C	–
F7	A	–	R	R	–	R/A
...						

Table 4

Function (F)	Organisational units (OU)					
	OU1	OU2	OU3	OU4	OU5	...
F1	I	I	–	R	C	R/C
F2	C	–	A	C	–	I
F3	–	C	C	A	R/C	–
F4	C	C	A	C	I	R/I
F5	C	C	R	–	I	A
F6	–	I	C	I	R/A	C
F7	I	–	C	I	R	–
...						

Table 5

Function (F)	Organisational units (OU)					
	OU1	OU2	OU3	OU4	OU5	...
F1	A	C	R	–	C	C
F2	I	C	C	C	A	I
F3	I	R	C	–	R	R
F4	C	R	R	R	I	A
F5	R	C	C	A	R	R
F6	C	C	A	–	I	I
F7	I	A	–	I	C	R
...						

2. If many roles for a unit are marked with A (accountable) it is recommended to distribute responsibility more evenly (Table 3).

3. There are no roles R and A then there is inappropriateness of existence of this organisational unit within performance of the considered functions (Table 4).

4. If there are no empty cells, then it is possible that all organisational units are overloaded (Table 5).

Horizontal analysis of RACI matrix reflects quality of organisation of operations, for example:

1. If there are many R (responsible) cells in a row, a duplication of functions is possible (Table 6).

2. If there are many A (accountable) cells in a row, there is a «diffusion» of responsibility (Table 7).

3. If there are many C (consulted) cells in a row, then unnecessary approvals significantly increase execution time of the function (Table 8).

4. If there are no I (informed) cells in a row, then there is an inexpediency of performing this function (there is no consumer of the result of performing the function) (Table 9).



Table 6

Function (F)	Organisational units (OU)					
	OU1	OU2	OU3	OU4	OU5	...
F1	R	R	R	R	R	R
F2	C	R	A	–	A	I
F3	A	C	C	I	C	R
F4	A	–	C	R	I	A
F5	C	I	I	R	R	A
F6	C	A	R	–	I	C
F7	C	R	–	A	R	I
...						

Table 7

Function (F)	Organisational units (OU)					
	OU1	OU2	OU3	OU4	OU5	...
F1	R	I	R	R	A	C
F2	C	A	A	A	A	A
F3	–	C	R/A	I	A	R
F4	A	–	C	R	I	–
F5	C	I	I	R	R	A
F6	C	–	R	–	I	R/A
F7	C	R	–	C/I	R	C/I
...						

Table 8

Function (F)	Organizational units (OU)					
	OU1	OU2	OU3	OU4	OU5	...
F1	R	I	C	R	R/C/A	C
F2	C	R	A	–	C	I
F3	A	K	C	I	I	R
F4	R	–	C	R	I	A
F5	C	C/I	C	C	C	C
F6	C	A	R	–	I	C
F7	C	R	–	A	R	I
...						

Table 9

Function (F)	Organizational units (OU)					
	OU1	OU2	OU3	OU4	OU5	...
F1	R	–	R	C	A	C
F2	C	R	A	–	C	I
F3	A	C	C	I	I	R
F4	–	–	C	C	I	R/C
F5	C	C/I	–	R	R	A
F6	R	A	R	–	I	C
F7	C/I	R	–	A	R	I
...						



RACI matrix is a versatile model. It is used for functional analysis or analysis of processes at any level.

Other Methods and Tools for Managerial Labour Rate Setting

Since administrative and management personnel work mainly with information and documents, a workflow matrix is used as an auxiliary tool for functional analysis. It is formed in any form and must contain information about the name of the organisational unit, the functions performed, the list of documents generated (orders, orders, regulations, reports, etc.) as a result of performance of these functions, information about those involved in approval, consumers and customers of each specific document, a method of transferring information. The workflow matrix makes it possible to identify such manifestations of bureaucracy as formation of unclaimed documents, unnecessary reports, excessive corporate procedures for approving documents, an irrational document flow system between organisational units, and, therefore, to reveal the facts of performing by administrative and managerial personnel of operations that do not create value for the company.

Functional analysis is convenient in that it allows quickly and pointwise identifying deficiencies in organisation design of individual organisational units of the company. However,

it does not provide a full-fledged vision of how management functions are distributed and interconnected in the product creation chain, how they are performed, how their implementation affects creation of this product [18; 19].

For the purposes of analysis and standardisation of labour costs, the company practices a complex application of process and functional analysis, including managerial ones, using ARIS software. This allows identifying «empty» management processes (either separate «empty» functions in the process), duplicating functions, redundant communications in cross-functional interaction (meetings, approvals, etc.), control procedures that do not affect key indicators of the final product, and therefore, revealing excessive labour costs of administrative and managerial personnel.

The sources for construction and analysis of models of management processes are current local documents of the company (standards, regulations, regulations for implementation of processes, as well as regulations for cross-functional interaction between business units of the company, etc.).

This work is carried out on an ongoing basis both by the company's divisions – owners of processes, and by specialised divisions: Centre for Labour Management and Design of Economic Standards and Centres for Improving Personnel Labour Efficiency which are part of regional centres of corporate governance.



Based on the results of the process (functional) analysis for the identified redundant functions or communications, labour costs of managers and specialists are estimated regarding the perform work that does not create value.

To study data on unproductive costs of working time, as well as to determine labour costs for the entire process (function) as a whole, they use a complex data collection by the method of questionnaires, interviewing employees, collecting statistical data over a long period, and requesting expert opinions. To confirm expert assessments, control measurements are carried out to determine the coefficient of confidence in experts.

To standardise (determine the optimal number) of specialists and employees of administrative and managerial personnel, «as it should be» process models (functional models) are designed without considering functions that do not create value. Then the models of processes (sub-processes, functions) are differentiated, which can be standardised. These are the processes that can be decomposed into simple operations, and their execution time can be measured.

To standardise labour costs of a particular organisational unit, it is necessary to have a complete database of models of all processes in which it participates.

The following requirements are imposed on the models of processes for the possibility of their use as a tool in regulation of labour of employees [20–22]:

- All the participants in the process have been identified up to the level of a specific employee.
- Cyclicity and variability of the process is known.
- Statistically significant indicators of operations were selected and, if necessary, differentiated by complexity. For an end-to-end business process, a meter should be used that is single for all participants in the process.
- The loss of working time, which does not depend on the participants in the process, as well as the amount of auxiliary work are determined.

This method is most effective for standardising labour costs of specialists and employees when they perform the functions of typical (standard) processes (for example, planning operating costs, analysing wages, developing business intelligence results, etc.).

Identification of labour costs for implementation of design and rule-making

activities is also carried out in an expert way, based on data on the share of working time spent on performance of certain functions related to development of regulatory documents or work as part of project teams.

Taking into account the peculiarities of the structure of the work of managers, in order to standardise their number, a technology is being developed for determining differentiated standards for the number of managers and management units through finding, considering analysis of influencing factors, the normative limit values of interrelated key indicators of the organisational and functional model: controllability standards, the number of direct subordinates, the ratio of the number of managers and subordinates in an organisational unit.

CONCLUSIONS

The main results of the study include tools for analysis and standardisation of management activities adapted for the companies of the Russian Railways holding company. The prerequisites for introduction of these tools, «triggers» of the work of business units, revealing problem areas of management activities were identified. Forms of visual analysis and interpretation of management information are proposed, allowing systematising and normalising management functions.

Based on the factor rate setting methodology described in the article, methodological recommendations for assessing the balance of working hours are currently being developed for the company's divisions, considering the application of the process approach. This document reflects the main stages of determining labour costs of white-collar employees, as well as ways of solving problems that arise when using the method, and examples of step-by-step research of intellectual occupations.

This will allow the company's divisions to receive the most reliable results on labour costs in the shortest time and to independently develop labour standards.

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Information about the authors:

Nikitin, Vladimir N., Ph.D. (Economics), Head of the Department for Labour Management, Remuneration and Motivation of JSC Russian Railways, Moscow, Russia, nikitinnv@center.rzd.ru.

Kalashnikov, Mikhail Yu., Director of the Centre for Labour Management and Design of Economic Standards, a branch of JSC Russian Railways, Moscow, Russia, kalashnikovmu@center.rzd.ru.

Litvinova, Olesya S., Deputy Head of the Unit for Branches Activity of the Organisational and Manning Direction of the Department for Labour Management, Remuneration and Motivation of JSC Russian Railways, Moscow, Russia, litvinovaos@center.rzd.ru.

Article received 16.02.2021, approved 23.04.2021, accepted 29.04.2021.

